

# USCMS Engineer Status Report for January 2004

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## 1 Work Performed This Month

o) IGUANACMS 1.3.0 is released: based on CMS\_83a\_IGUANACMS configuration with IGUANA\_4.5.0, ORCA 7.5.2, COBRA 7.4.3, OSCAR 2.4.5.

This release is mainly focusing on providing consistent configuration of external tools for further development of 2D. It is also one step more toward consolidation of ORCA and OSCAR visualisation. OSCAR tracks and hits are available now: similar to ORCA interactive access event by event, similar to ORCA html tables show the object properties.

o) OSCAR visualisation: Re-enabled 2D view. Simplified configuration parsing. Pick up menu items added, in particular "Next event".

o) New twigs added to OSCAR visualisation to show calorimeter (HCAL, ECAL) hits. Currently they show only text output.

o) New packages added for ORCA visualisation: VisCaloSimReader and VisCaloRecReader to handle Calorimetry events for different readers.

Work on the next release IGUANACMS\_1.4.0: OSCAR visualisation of hits, tracks, magnetic field and ORCA visualisation of tracks, hits, jets and digis. This release is based on CMS\_84.4 CMS configuration with IGUANA 4.6.0 COBRA 7.5.0, OSCAR 2.4.6 and ORCA 7.6.0.

It includes for ORCA Visualisation:

Reintroduced reconstructed and digitized objects, as well as objects dependent on the reconstruction code: Sim Tracker tracks, Rec Tracker tracks, MC and Rec Jets, ECAL digis, HCAL digis, Sim Muon tracks, Rec Muon tracks, Muon segments, CSC, RPC rec hits.

Configured all of the above to be available for both SimReader and RecReader

OSCAR Visualisation:

Visualisation of detector: Checked and repackaged if needed to be able to visualise only detector.

Visualisation of hits by detectors: HCAL hits, ECAL hits, Split on barrel/endcap hits.

Visualisation of trajectories: Optimization of visualized trajectories by showing every n-th step (as SimpleConfigurable). Shown as a tree.

Magnetic field restored.

o) Documentation is updated.

## **2 Status of Deliverables**

The milestone OSCAR visualisation of detector, hits, tracks, magnetic field is met (IGUANACMS\_1.4.0).

## **3 Plans For Next Month**

- o) Prepare a demo of OSCAR visualisation for SPROM meeting; collect feedback;
  - o) Prepare a demo for ORCA visualisation for the Tracker week;
  - o) Reconstruction geometry for muon and calorimetry;
  - o) Implement grid axis;
  - o) Trace and debug known problems with the new shapes;
  - o) Port to the new versions of SEAL, COBRA, ORCA and OSCAR.

## **4 Longer Term Plans**

- o) Complete the addition of key missing ORCA visualisation functionality: e.g. lego, etc.